

**Notice of Allowability**

Application No.

10/085,338

Examiner

William T. Leader

Applicant(s)

GANDIKOTA ET AL.

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 6/28/04.
2. ☒ The allowed claim(s) is/are 1-8 and 28-36.
3. ☒ The drawings filed on 27 February 2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☐ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

### DETAILED ACTION

1. Receipt of the papers filed on June 28, 2004, is acknowledged. Claim 9 has been canceled. Claims 1-8 and 28-36 are pending.

### *Allowable Subject Matter*

2. Claims 1-8 and 28-36 are considered to be allowable over the prior art of record for the reasons given by applicant. The amendments have overcome the objections to the specification.

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Lowenheim text *Electroplating* discusses the anodes used in electroplating. Lowenheim teaches that impurities in the anode metal may disengage from the anode and form undissolved particles. The undesirable effects of undissolved particles are often avoided in practice by the use of anode bags or diaphragms. See page 153.

4. The Reid et al patent (6,569,299) is directed to apparatus for electroplating semiconductor wafers. A general electroplating apparatus is shown in figure 1. Wafer 38 is exposed to the electroplating solution. The solution overflows from the top of the apparatus as shown by arrows 54. A detailed illustration of the anode is shown in figure 2. Anode 62A includes an anode cup 202, contact 204, ion source

material 206, and a membrane 208 (column 4, lines 53-55). Outlets 248 and 250 are provided from the anode (column 7, lines 20-24). Since Reid et al indicate that membrane 208 is a part of the anode, these outlets are within the anode. They are not considered to be at a position between the overflow outlet and the anode as recited in the instant claims.


5. The Sakaki et al patent (6,332,963) is directed to a plating apparatus for semiconductor wafers. The apparatus is shown in figure 1. Plating solution overflows from the top of the apparatus as shown by the arrows. The apparatus includes anode 6 and diaphragm 7. A gas release port 9 is provided in the space between anode 6 and diaphragm 7. As in Reid et al, port 9 is considered to be within the anode structure and not at a position between the overflow outlet and the anode.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William T. Leader whose telephone number is 571-272-1245. The examiner can normally be reached on Mondays-Thursdays and alternate Fridays, 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached on 571-272-1244. The fax phone

number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
William Leader  
September 17, 2004

  
ROY KING  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700